

POLITICIZATION IN CENTRAL BANK DECISIONS: TEXT MINING IN THE MINUTES OF THE COPOM 2002 – 2024

ttps://doi.org/10.56238/arev6n4-401

Submitted on: 11/24/2024 Publication date: 12/24/2024

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ABSTRACT

More precisely, in 2021, the Central Bank (BC) gained its independence. Although these are different periods of the economy, both in the microeconomic and macroeconomic spheres, we sought to analyze the composition of the minutes from 2003 to 2024, which ranges from the government of President Lula to the independence of the Central Bank. The objective was to verify if there was any correlation between the governments and the decisions of the Central Bank. For this, Natural Language Processing (NLP) was used, a field of artificial intelligence that focuses on the interaction between computers and human language. Next, the clustering of the data extracted from the minutes was carried out. This analysis made it possible to identify linguistic and structural patterns that could indicate changes in the BC's approach over the years, influenced by the guidelines of each government. The study aimed to explore how changes in government may have influenced the decisions of the Central Bank. The relationship of the words present in the COPOM minutes, the similarity between the minutes of different governments and the relationship of the grammatical classes used in COPOM decisions with the behavior of the basic interest rate were analyzed.

Keywords: Central Bank. Copom. Text Mining.

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INTRODUCTION

The role of central banks in the formulation of economic and monetary policies has been widely debated in the Brazilian context, especially with regard to their independence and political influences. From 2002 onwards, the Central Bank of Brazil (BCB) underwent a process of greater politicization, inserting itself in a scenario where monetary policy decisions were increasingly influenced by internal and external political dynamics, leading to questions about its operational autonomy. The literature shows that, although the autonomy of the Central Bank is an essential condition for economic stability, its implementation and functioning in Brazil were often crossed by political issues (CARVALHO, 1995).

In the 1990s, central bank independence was widely promoted as a mechanism to reduce political interference and ensure price stability (MENDONÇA, 2003). However, this separation between politics and technique has not always materialized, especially in Brazil, where monetary policies have often reflected the priorities of the governments in office (SCHAPIRO, 2024). The politicization of the Central Bank during governments with different ideological orientations impacted the public perception of its performance, as observed in the analyses of Novelli (2002), who highlights the conflict between the predominant economic ideas and the institutional changes in the BCB.

In fact, the Central Bank of Brazil has faced varying degrees of political interference in its decisions since its founding. Studies such as that of Santos and Carvalho (2023) indicate that, at certain historical moments, technocracy prevailed, subordinating politics to the needs of economic stabilization. This dynamic is particularly relevant when considering periods of political and economic transition, where the Central Bank had to align itself with the demands of governments and, at the same time, maintain a level of autonomy to implement its inflation and monetary stability targets.

This article analyzes the decisions made by the Central Bank of Brazil between 2003 and 2024, exploring how changes in government may have some correlation with the decisions of the Central Bank. To this end, the relationship of the words arranged in the COPOM minutes, the similarity of the minutes by government and the relationship of grammatical classes in COPOM decisions in the behavior of the basic interest rate were analyzed.



THEORETICAL FRAMEWORK

The independence of central banks, especially in the Brazilian context, has been widely discussed by economists and political scientists, focusing on the tensions between politics and technique and their implications for governance and monetary policy. The literature highlights that, although the autonomy of the Central Bank is considered fundamental to ensure economic stability, its implementation and maintenance in Brazil have been marked by considerable political interference, raising questions about its true independence.

According to Carvalho (1995), the proposal for the autonomy of the Central Bank gained strength in the 1980s and 1990s, with the objective of ensuring greater credibility to monetary policies and reducing the direct influence of the government on these decisions. The author criticizes the orthodox view that defends complete independence, highlighting that the Central Bank's decisions cannot be isolated from political and social needs, especially in emerging contexts such as Brazil, where demands for economic growth and reduced unemployment remain high.

In addition, Mendonça (2003) discusses the relationship between the independence of the Central Bank and the coordination of macroeconomic policies, arguing that the simple adoption of an independent monetary authority does not guarantee, by itself, economic stability. For the author, there needs to be effective coordination between monetary and fiscal policies, something that is not always prioritized in developing countries. In terms of advantages, Mendonça points out that independence can reduce inflationary bias, but warns that its implementation, without an adequate coordination structure, can harm other macroeconomic objectives, such as economic growth and job creation.

In the same vein, Schapiro (2024) explores the legal bases of the Central Bank's operational autonomy in Brazil, especially between 1999 and 2020, highlighting that, even without formal legal mandates, the BCB acted autonomously thanks to a set of institutional factors that limited direct political interference. Schapiro emphasizes the importance of external coalitions and the regulatory capacity of the Central Bank as elements that, in practice, guaranteed the institution's autonomy during this period, even though its independence was more de facto than de jure.

Novelli (2002) also contributes to this discussion, focusing on the role of the economic and political ideas that have shaped the Central Bank of Brazil throughout its



history. The author argues that the institutional changes of the BCB were strongly influenced by dominant ideological currents, especially neoliberalism in the 1990s, which promoted the view that the autonomy of the Central Bank was essential to ensure price stability. This approach, however, according to Novelli, disregards the social impacts and the demands of economic policies that go beyond simple monetary stabilization.

Santos and Carvalho (2023), on the other hand, highlight the tension between politics and technique in the Central Bank's performance, exploring the use of a technocratic rationality that often places economic technique above political and social considerations. For the authors, this dichotomy between politics and technique is problematic, as it can lead to the disregard of democratic and social issues in favor of a purely technical view of the economy, which, ultimately, can result in the so-called "trivialization of evil" in public policies, as discussed by thinkers of the Frankfurt School.

Finally, Carvalho (1995) and other authors point to the central dilemma faced by the Central Bank: how to balance the need for independence to ensure effective monetary policies with the political reality of the country, where governments often seek to influence economic decisions to promote their short-term agendas. The politicization of the Central Bank, especially during political transitions, is seen as one of the biggest challenges to its autonomy.

RESULTS

crescimento atividade econômica comprativamente respectivamente pessoas físicas ajuste sazonal que da ajuste sazonal que da ajuste sazonal mássiria transformação alta segundo dados elevação produção primeiro trimestre de ajuste sazonal primeiro trimestre de ajuste sazonal produção industrial igo di taras jum produção industrial igo di taras jum produção industrial igo di taras jum produção produção bens dados dessazonal izados produção de sazonal individados pro

Figure 1. Word Balloon of the Copom Minutes in the Lula Government

The data analysis was cut from the first term of the Lula government to the end of the second term. During this period, 76 COPOM meetings took place. By mining the text of the minutes of the Copom over the two terms, a cloud of words was created. After this



ISSN: 2358-2472

agglomeration of words used in the minutes, an average of 28832 words used was reached with a prevalence of nouns with 1120 words, 747 verbs and 845 adjectives. The most used nouns were, increase, expansion, the verbs were, manage, accumulate, achieve, register and the adjectives were, scenario, exchange, industrial and trajectory. Throughout his terms, there were 19 interest rate hikes, but the interest rate was delivered much lower than that received by his predecessor. In a complementary analysis, it was identified that other relevant terms also emerged, such as consumption, growth, capital and production, words that reinforce the economic and productive focus of the Lula government. The analysis of these words demonstrates a clear emphasis on strategies of economic stability and sustainable development, often linked to the trajectory of the Selic Rate and the pursuit of macroeconomic goals. For example, the word trajectory often appears in contexts of economic projections, while growth and expansion refer to policies aimed at broadening the economic base and increasing productivity. When observing the behavior of the meetings and the words in the minutes, it is noted that nouns such as goods and wage bill appear in discussions about the impact of decisions on the real economy, while verbs such as increased and retreat reflect actions related to fluctuations in rates and projections. The presence of terms such as seasonal adjustment and targets points to the concern with the alignment of decisions with economic seasonality and the fulfillment of fiscal and monetary targets. Thus, the study of words reveals not only the guidelines followed by COPOM, but also the impacts of these decisions on the different sectors of the economy, especially with regard to the stability of inflation and the promotion of economic growth with the reduction of inequalities. It is worth mentioning that during the Lula 1 government there were 19 interest rate hikes, but at the end of her term the interest rates were delivered for Dilma's term with a Selic rate much lower than when she assumed the presidency.

Table 1 - Copom meetings in the Lula government

Copom	Year	Selic	Copom	Year	Selic	Copom	Year	Selic	Copom	Anus	Selic
80	2003	25,5	99	2004	16	118	2006	15,75	137	2008	13,75
81	2003	26,5	100	2004	16,25	119	2006	15,25	138	2008	13,75
82	2003	26,5	101	2004	16,75	120	2006	14,75	139	2008	13,75
83	2003	26,5	102	2004	17,25	121	2006	14,25	140	2009	12,75
84	2003	26,5	103	2004	17,75	122	2006	13,75	141	2009	11,25
85	2003	26	104	2005	18,25	123	2006	13,25	142	2009	10,25
86	2003	24,5	105	2005	18,75	124	2007	13	143	2009	9,25
87	2003	22	106	2005	19,25	125	2007	12,75	144	2009	8,75
88	2003	20	107	2005	19,5	126	2007	12,5	145	2009	8,75
89	2003	19	108	2005	19,75	127	2007	12	146	2009	8,75



ISSN: 2358-2472

90	2003	17,5	109	2005	19,75	128	2007	11,5	147	2009	8,75
91	2003	16,5	110	2005	19,75	129	2007	11,25	148	2010	8,75
92	2004	16,5	111	2005	19,75	130	2007	11,25	149	2010	8,75
93	2004	16,5	112	2005	19,5	131	2007	11,25	150	2010	9,5
94	2004	16,25	113	2005	19	132	2008	11,25	151	2010	10,25
95	2004	16	114	2005	18,5	133	2008	11,25	152	2010	10,75
96	2004	16	115	2005	18	134	2008	11,75	153	2010	10,75
97	2004	16	116	2006	17,25	135	2008	12,25	154	2010	10,75
98	2004	16	117	2006	16,5	136	2008	13	155	2010	10,75

Prepared by the authors

Figure 2. Word Balloon of the Copom Minutes in the Dilma Government



Prepared by the authors

By mining the text of the minutes of the Copom throughout President Dilma's term, a cloud of words was created. After this agglomeration of words used in the minutes, an average of 25059 words was reached, with a greater predominance of nouns in relation to verbs, with the average distribution being 1013 for nouns, 664 verbs and 739 adjectives. As for the verbs, they were, "Accumulate", "Retreat", "Achieve", "Register". As for adjectives, the word that appeared the most was capital and as for nouns it was operations, growth, variation, goods and committee. It is noteworthy that during this period there were 46 COPOM meetings. It is worth mentioning that during Dilma's government there were 21 interest rate hikes and at the end of her term she closed it with a higher interest percentage than she received from her predecessor.

Table 2 - Copom meetings in the Dilma government.

				,		,		
Copom	Anus	Selic	Copom	Anus	Selic	Copom	Anus	Selic
156	2011	11,25	174	2013	7,5	192	2015	14,25
157	2011	11,75	175	2013	8	193	2015	14,25
158	2011	12	176	2013	8,5	194	2015	14,25
159	2011	12,25	177	2013	9	195	2015	14,25
160	2011	12,5	178	2013	9,5	196	2016	14,25
161	2011	12	179	2013	10	197	2016	14,25
162	2011	11,5	180	2014	10,5	198	2016	14,25



ISSN:	2358	-2472

163	2011	11	181	2014	10,75	199	2016	14,25
164	2012	10,5	182	2014	11	200	2016	14,25
165	2012	9,75	183	2014	11	201	2016	14,25
166	2012	9	184	2014	11			
167	2012	8,5	185	2014	11			
168	2012	8	186	2014	11,25			
169	2012	7,5	187	2014	11,75			
170	2012	7,25	188	2015	12,25			
171	2012	7,25	189	2015	12,75			
172	2013	7,25	190	2015	13,25	·		
173	2013	7,25	191	2015	13,75			

Prepared by the authors

Figure 3. Word Balloon of the Copom Minutes in the Temer Government



Prepared by the authors

The data analysis took place during President Temer's term. During this period, 18 COPOM meetings took place. Through text mining with the minutes of the copom of the period, it was observed the use of an average of 8355 words, with a greater predominance of nouns in relation to verbs, with the average distribution being 342 for nouns, 182 verbs and 270 adjectives. It is noteworthy that, in relation to previous governments, it was the first time that within the minutes there was a greater prevalence of adjectives in relation to verbs. As for the verbs, the words that appeared the most were "Wait", "Resume", as for the nouns they were, "economy", "committee" and "members", as for the adjectives were, scenario. It is worth mentioning that during Temer's government there were no interest rate hikes and at the end of his term he closed it with a lower interest percentage than his predecessor.

Table 3 - Copom meetings in the Temer government

Copom	Anus	Selic	Copom	Anus	Selic
202	2016	14,00	211	2017	7,00
203	2016	13,75	212	2018	6,75
204	2017	13,00	213	2018	6,50



ISSN: 2358-2472

205	2017	12,25	214	2018	6,50
206	2017	11,25	215	2018	6,50
207	2017	10,25	216	2018	6,50
208	2017	9,25	217	2018	6,50
209	2017	8,25	218	2018	6,50
210	2017	7,50	219	2018	6,50

Prepared by the authors

Figure 4. Word Balloon of the Copom Minutes in the Bolsonaro Government



Prepared by the authors

The data analysis took place during President Bolsonaro's term. During this period, 17 COPOM meetings took place until the independence of the Central Bank. Through text mining with the minutes of the period, an average of 7787 words was observed, with a greater predominance of nouns in relation to verbs, with the average distribution being 306 for nouns, 176 verbs and 250 adjectives. As in Temer's government, adjectives had a prevalence over verbs. As for the verbs, they were, "Anchor", "Evaluate". As for the adjectives, the word that appeared the most was "expectations" and as for the nouns it was "economy" and "members". It is worth mentioning that during the Bolsonaro government there were no increases.

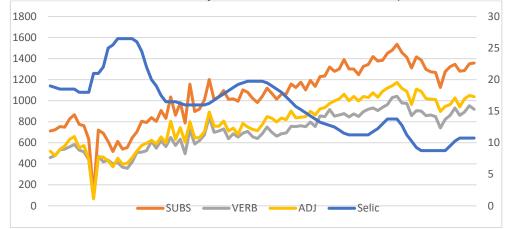
Table 4 - Copom meetings in the Bolsonaro government

Copom	Anus	Selic	Copom	Anus	Selic
220	2019	6,50	228	2020	4,25
221	2019	6,50	229	2020	3,75
222	2019	6,50	230	2020	3,00
223	2019	6,50	231	2020	2,25
224	2019	6,00	232	2020	2,00
225	2019	5,50	233	2020	2,00
226	2019	5,00	234	2020	2,00
227	2019	4,50	235	2020	2,00
			236	2021	2,00

Prepared by the authors



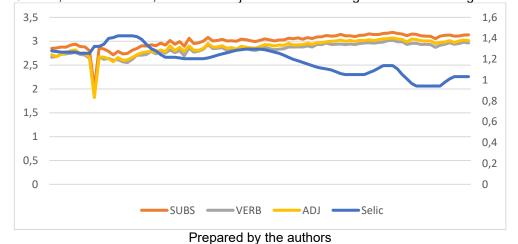
Figure 5. Selic, Substatntiives, Verbs and Adjectives in the Minutes of the Copom in the Lula Government



Prepared by the authors

For the table above, a text mining of the minutes from the first to the second terms of President Lula was carried out. Nouns, verbs, adjectives were separated, the Selic rate was added, overlapping them all. It is possible to observe in this graph the greater existence of nouns, followed by adjectives and verbs. However, the important point is the behavior of the basic interest rate in the composition of the words of the minutes, we have seen that the Selic when crossing nouns, verbs and adjectives in any direction, its performance tends to be more pronounced.

Figure 6. Selic, Substatntitivos, Verbs and Adjectives in the Lula government on a logarithm scale

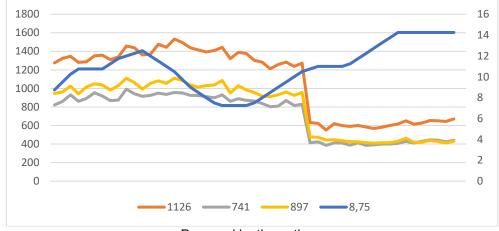


In order to have a clearer view of the data presented, the data were placed on a logarithmic scale in order to smooth out the oscillation. What can be seen more clearly in figure 6 is what was presented in figure 5, where after crossing the basic interest rate of the lines of adjectives and verbs, the action of the Selic is more pronounced. Initially, the



interest rate crosses the line of nouns downwards, however, because it has not exceeded the others, the trend process is not clear.

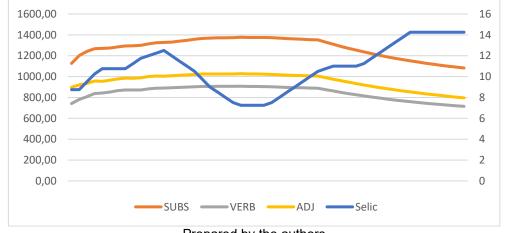
Figure 7. Selic, Statistics, Verbs and Adjectives in the Minutes of the Copom in the Dilma government



Prepared by the authors

For the table above, text mining was used using the minutes of the Dilma Government. It can be observed that the basic interest rate initially crosses the line of nouns, but with little force. However, in the following movements, it can be observed that after the crossing of the three lines, there is a much more accentuated growth in the basic interest rate.

Figure 8. Selic, Substattiives, Verbs and Adjectives in the logarithm scale in the Dilma government



Prepared by the authors

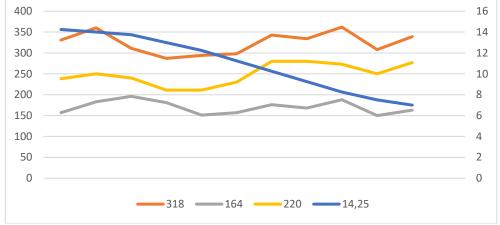
In order to have a clearer view of the data presented, the above data were placed on a logarithmic scale in order to smooth the data. What can be seen, but more clearly in graph 8 is what was stated in graph 7, where after the crossing of the basic interest rate of



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the lines of adjectives and verbs and nouns there is a more expressive rise and the trend ends up becoming clearer.

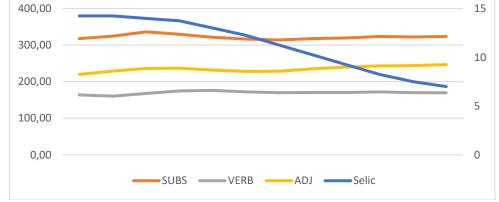
Figure 9. Selic, Statistics, Verbs and Adjectives in the Minutes of the Copom in the Temer Government



Prepared by the authors

Due to the short period of President Michel Temer in the presidency, the analysis interval was slightly reduced compared to previous presidents. Based on the analysis of the previous graphs, it can be seen that the reduction was much more modest, largely due to the non-crossing of the Selic in the lines of verbs and nouns. Another important point is that during the meetings of the Temer government, the average number of words used in the meetings was much lower than that of previous governments.

Figure 10. Selic, Substattiives, Verbs and Adjectives in the Logarithmic Scale in the Temer Government

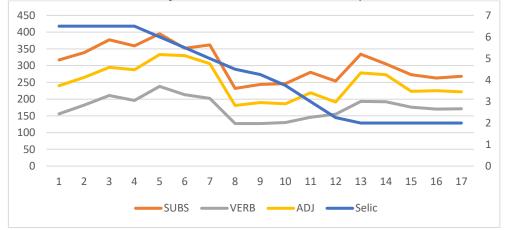


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In the graph above, it is possible to observe more clearly what has been exposed above. There is a downward trend in interest rates, especially after crossing the line of adjectives. However, its trend is not clear.



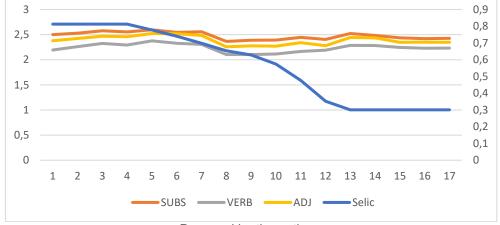
Figure 11. Selic, Nouns, Verbs and Adjectives in the Minutes of the Copom in the Bolsonaro Government



Prepared by the authors

For the table above, text mining was used using the minutes of the Bolsonaro Government. An initial drop is observed after the Selic crosses the line of nouns, but it is accentuated after the crossing of the three lines, nouns, adjectives and verbs and then there is stability.

Figure 12. Selic, Substatntiives, Verbs and Adjectives on a Logarithmic Scale in the Bolsonaro Government

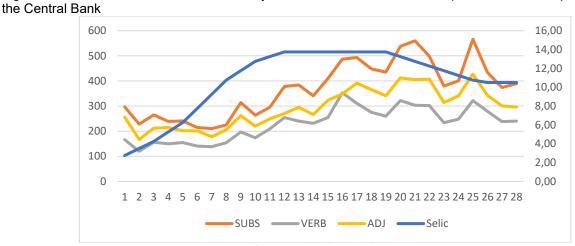


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In the graph above, the data were placed on a logarithmic scale in order to smooth the results. What can be seen is a little of what has already been shown in chart 9, where the downward trend is accentuated after the crossing of both lines.



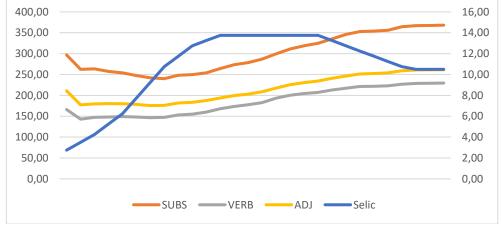
Figure 11. Selic, Substatistics, Verbs and Adjectives in the Minutes of the Copom After the Independence of



Prepared by the authors

In the chart above, you can see the variation in the Central Bank's interest rates. In the former, there is a significant rise in interest rates after the crossing of the lines of adjectives, verbs and nouns by the selic. Throughout the graph it is possible to observe a drop in the interest rate, but without a clear trend.

Figure 12. Selic, Substattiives, Verbs and Adjectives on a Logarithmic Scale Central Bank

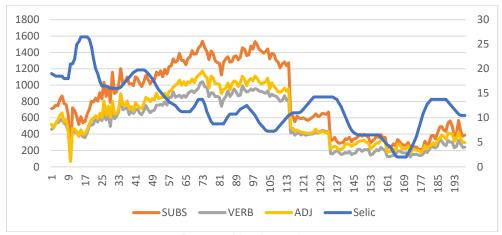


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The graph above shows what has already been shown in graph 11, but on a logarithmic scale. The aim was to smooth the data and improve the visualization of oscillations.



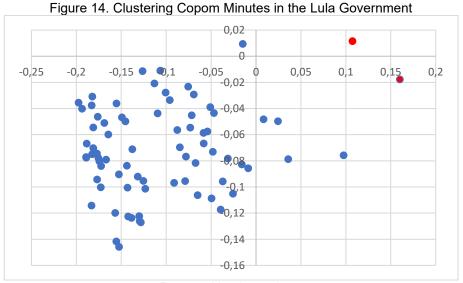
Figure 13. Selic, Substattiives, Verbs and Adjectives of the Governments, Lula, Dilma, Temer, Bolsonaro and



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In the graph above, you can see the fluctuations of the selic in relation to the minutes of the Lula government until the independence of the Central Bank.

THROUGHOUT THE ANALYSIS OF THE MINUTES, IT CAN BE OBSERVED THAT IN FOUR MOMENTS THERE ARE THREE TOTAL CROSSINGS OF LINES, EITHER HIGH OR LOW. IN BOTH CASES, A VERY CLEAR TREND CAN BE FOUND IN BOTH SITUATIONS.



Prepared by the authors

Within the clustering of the minutes of the Lula government, it is possible to observe a concentration of the minutes on the left side of the graph. The points plotted on the right side refer to the minutes of the beginning of the mandate and contemplate the first two years of the mandate. The minutes on the right side are at 80,81,83,85,86,88. It should be

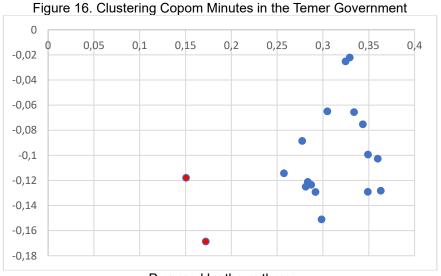


noted that during this period the Selic rate ranged from 26.50% to 8.75%. The outlier shown in the table in red refers to minutes 80 and 81 and in both decisions of the Copom there was an increase in the basic interest rate.

Figure 15. Clustering Copom Minutes in the Dilma Government -0,2 0,1 0,2 0,3 0,4 0,02 0,04 0,06 0,08 -0.1 -0,12 -0,14-0,16 -0,18-0,2

Prepared by the authors

Within the clustering of the minutes of the Dilma government, it is possible to observe a concentration on two sides of the graph. The points plotted on the right side in red refer to minutes 181, 199, 200 and 201. It is worth mentioning that minutes 199 to 201 were for maintaining the basic interest rate and 181 was for high.



Prepared by the authors

Within the clustering of the minutes of the Temer government, a lack of standard in



the minutes can be observed. The dots plotted on the left side in red are two outliers referring to minutes 203 and 204. In both minutes, the Selic was maintained at the same percentage. It is worth mentioning that the clustering was carried out taking into account the similarity between the minutes.

Figure 17. Clustering Copom Minutes in the Bolsonaro Government

0,15

0,1

0,05

0

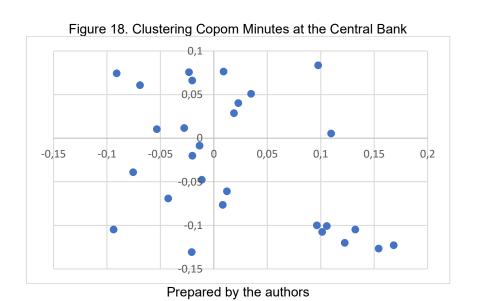
0,1

0,05

-0,05

Prepared by the authors

Within the clustering of the minutes of the Bolsonaro government, there is a lack of standard in the minutes. And this lack of standardization is continuous and can be evidenced in the minutes of the Temer government, then a little less uniform in the Bolsonaro government and finally in the minutes of the Central Bank, after its independence.





In the minutes of the Central Bank's copom, there is the apex of the lack of standardization of the minutes. Such behavior is independent of the decisions to be made. It should be noted that the independence of the Central Bank occurred during the pandemic period.

METHODOLOGY

Natural Language Processing (NLP), a field of artificial intelligence, focuses on the interaction between computers and human language. With NLP, machines can understand, interpret, and generate texts in a similar way to human language use, allowing the automation of various linguistic tasks (CASELI, 2024).

In the economic context, the Monetary Policy Committee (COPOM) of the Central Bank of Brazil plays an essential role in defining the country's monetary policy. The minutes produced by COPOM are a rich source of information, detailing the decisions and economic perspectives. These documents, published regularly, explain the rationale for the decisions made, offering *insights* into the economic scenario, inflation expectations, exchange rate and other macroeconomic indicators. With the advances of the PLN, it becomes possible to automate and deepen the analysis of these minutes, extracting patterns, anticipating economic movements and better understanding the Central Bank's rhetoric.

In order to extract knowledge and identify patterns in the texts from the COPOM minutes, a text processing flow was carried out using NLP techniques. Figure XX shows the steps used in the flow for analysis of the COPOM minutes.

Figure XX: Text processing flow used for analysis of COPOM minutes.

POS
(part-of-speech)
tagging

Pré-Processamento

Remoção
de Stopwords

Tokenização

Corpus
de atas do
COPOM

Nuvem
de Palavras

Clusterização

Clusterização

From the texts of the COPOM minutes, a pre-processing stage was carried out, essential to carry out the subsequent analyses, divided into three other stages:

1. Normalization: Includes removing symbols and special characters, converting to



lowercase, and eliminating irrelevant numbers;

- 2. Removal of *Stopwords*: Elimination of words considered irrelevant to the analysis, such as articles (a, the, as, the), prepositions (in, of, for) and pronouns (he, she). This reduces the "noise" in the text and focuses only on the words with the most relevance; and
- 3. Tokenization: segmentation of texts into words.

After pre-processing, the set of texts is transformed into a corpus, which represents the texts treated and ready for analysis. From the corpus, four analyses were carried out using NLP techniques, described below:

- 1. POS (part-of-speech) tagging: Identification of the grammatical classes of words (nouns, verbs and adjectives).
- Word Frequency: Calculation of the number of occurrences of each word in the corpus, in order to identify the most frequent terms and, potentially, the main themes.
- Word Cloud: Visual representation of the most frequent words, where the size of each word is proportional to its frequency, being an intuitive and quick way to identify the central themes.
- 4. Clustering: Grouping similar words based on their characteristics. It helps to discover common topics, patterns, or themes present in the minutes.

To carry out clustering, it is necessary that the words contained in the corpus are represented numerically, through vectors of real values, known as semantic vectors (CASELI, 2024). To generate the numerical representation of the corpus, the TF-IDF (*Term Frequency times Inverse Document Frequency) technique was used*, according to Equation 1:

$$w_{i,d_j} = TF_{i,d_j} \times IDF_t = freq_{i,d_j} \times log_{10} \frac{N}{DF_i}$$
(1)

where $freq_{i,d_j}$ is the number of occurrences of the term in the document, is the number of documents in the collection, and is the number of documents that contain the term. id_iNDF_ii TF-IDF calculates the weighted frequency of words, considering their



relevance throughout the corpus (CASELI, 2024).

With the numerical representation of the corpus, the K-means algorithm was used, one of the most popular and simple methods of clustering (AHMED, 2020), with the objective of dividing the numerical representation of the corpus into groups so that the elements belonging to the same group are similar to each other and the elements in different groups are heterogeneous in relation to these same characteristics.

RESULTS AND DISCUSSIONS

The analysis of the COPOM minutes throughout the mandates of Lula, Dilma, Temer and Bolsonaro reveals important trends in the language and conduct of monetary policy, highlighting variations in the Selic rate in different economic contexts. In Lula's two terms, the average was 28,832 words per minute, with a predominance of nouns (1,120), followed by adjectives (845) and verbs (747). Words such as increase, expansion, and scenario indicate a focus on economic stability and productive growth. During this period, despite 19 interest rate hikes, the Selic was reduced from 26.50% to 8.75%, highlighting an effort to align monetary policy with economic development.

In the Dilma government, the average per minute fell to 25,059 words, keeping nouns (1,013) as predominant, followed by adjectives (739) and verbs (664). Terms such as growth and capital suggest an emphasis on economic expansion, although the increase in interest rates on 21 occasions resulted in a higher Selic rate at the end of the term, reflecting difficulties in balancing growth and inflation control.

In the Temer government, there was a significant reduction in the average number of words per minute (8,355), with a prevalence of adjectives (270) over verbs (182). Words such as scenario and economy signal a focus on economic conditions and stability, while the 18 COPOM meetings took place without interest rate hikes, ending the mandate with a lower Selic than the initial one.

In the Bolsonaro government, the average number of words per minute was 7,787, with nouns such as economy and adjectives such as expectations gaining prominence. The period reflected a context of economic consolidation and independence of the Central Bank, with no increases in the Selic rate, which reinforces the continuity of a stabilization policy.

The analyses suggest that the COPOM minutes follow the economic dynamics and reveal macroeconomic strategies. During the mandates of Lula and Dilma, the variation in



the Selic was associated with the use of nouns and verbs in the minutes, while in the Temer and Bolsonaro governments, the stabilization of the Selic was accompanied by a greater presence of adjectives, reflecting a focus on projections and expectations.

The results reinforce that the minutes not only record decisions, but also translate the economic guidelines of each government, evidencing an interaction between language, monetary policy and macroeconomic strategies.

Another important point was to verify the relationship between nouns and especially verbs and adjectives in the variation of the basic interest rate and how the SELIC varied more or less after the crossing of the three lines.

CONCLUSION

This study investigated the relationship of words displayed in the minutes of the copom over the period from 2003 to 2024. Noun parameters, verbs, adjectives and, additionally, the variation of the basic interest rate were considered. The results indicate a sharp upward or downward trend after crossing the lines plotted with nouns, verbs, and adjectives.

In addition, the survey generated a word cloud with the most frequent in the minutes, also counting the number of words, verbs, nouns, adjectives and classifying them in order of occurrence. An interesting point observed was that, in the first two governments, considered left-wing, there was greater similarity in the minutes. This similarity dissipated as center and right-wing governments, such as those of Temer and Bolsonaro, took over, culminating in the independence of the Central Bank.

The contributions of this study are significant, as they offer insights for understanding text mining in the minutes of the Central Bank. For future research, it is recommended to use text mining as a tool to assist in predicting fluctuations in the basic interest rate.

In short, this work not only fulfills the proposed objectives, but also opens the way for future investigations on the study of the minutes of the copom as a way to anticipate the decisions of the Central Bank and its impact on Brazil's monetary policy.



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